

ERMCO NEWS

EUROPEAN READY MIXED CONCRETE ORGANIZATION
ASSOCIATION EUROPEENNE DU BETON PRET A L'EMPLOI
EUROPÄISCHER TRANSPORTBETONVERBAND

Boulevard du Souverain 68
1170 Brussels
BELGIUM

Tel: Int + 32 (0) 2 645 5212
Fax: Int + 32 (0) 2 35 1467
URL: <http://www.ermco.eu>



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Welcome

At the end of last month, Verona was the scenario for the XVI ERMCO International Congress. We would like to take this opportunity to thank all of you who contributed to the great success of the event. A special thanks goes to Mr. Silvio Sarno, President of ATECAP, to Mr. Paolo Buzzetti, President of ANCE, and to the sponsors, in particular MAPEI and CIFA. The two days of work provided an opportunity to identify the threats and challenges of the situation for the ready-mixed concrete industry and to provide a vivid overview of the newest and best production techniques and economic strategies. Renowned experts from all over Europe were invited to share their knowledge on the technical performance of ready-mixed concrete for developing added value products. The ERMCO Representatives and various internal ERMCO meetings took place before and after the congress, during which the new ERMCO President, Mr. Stein Tosterud, was elected. The ERMCO Representatives meeting approved the new membership of the New Zealand Ready-Mixed Concrete Association as an Associate member. It was also agreed to organize the ERMCO Congress 2015 in Istanbul, Turkey. A presentation of what the next ERMCO Congress will be was made by our THBB colleagues. At the end of the two days of work all the participants were invited to attend a unique event, the opening night of the opera season at the Verona Arena.



ERMCO Secretariat team ■

Technical update – corrosion inhibitors

We know that corrosion of steel reinforcement (rusting) is one of the principal causes of deterioration of some concrete structures, and as readymix producers we design our mixes to comply with codes and standards to minimise the risk. Stainless steel reinforcement is expensive, so there has always been interest in corrosion inhibitors – admixtures – which can be added to the fresh concrete to prevent rusting.

Now comes news of some interesting research. It is somewhat commercial, emphasises one product, but there are some important general conclusions, too, e.g. a comparison of organic and inorganic inhibitors.

Read more by clicking [here](#).

Technical update – recycling of motorway concrete, Austria

The construction industry is constantly being pressed to increase its use of recycled materials. Often this is without any consideration of the availability of recycled materials, or of any technical problems associated with their use, or (worst of all) of the environmental impact of using recycled materials from long distances with high transport costs and high CO₂ emissions.

However, one area in which the use of recycled aggregates is undoubtedly a good idea is the construction of new roads, using recycled concrete from the old road, in-situ. Austria has made good progress in this area, and some interesting information can be got from a recent magazine article. Read the article [here](#).

What aggregates are suitable for use in concrete?

Much of the EcoTec meeting in Verona was taken up with discussions about the potential problems caused by the wording of the revised aggregate standard, prEN12620, *Aggregates for Concrete*. These problems arise because the standard includes *all* aggregates, then tries to identify those suitable/not suitable for concrete. The provision of 'declared' categories permits any declaration, no matter how unsuitable for concrete, to be aggregate conforming to EN12620.

Our technical team is worried that this may lead to the specification of unsuitable aggregates, simply because they are listed in the standard, and are therefore assumed to be suitable for use in concrete. For some of the unusual aggregate types listed in the standard there is no experience at all, no history of use in concrete.

ERMCO has asked its members what experience they have of these unusual aggregate types, so that it can decide how to approach this question during the public consultation period for the revision of the concrete standard, EN206.

At the same time, the EcoTec committee is trying to agree limits on fundamental aggregate properties so that it can propose clear requirements in the concrete standard.

New technology – 'photocatalytic concrete'

Old concrete is often stained by pollution and run-off water, not a pretty sight. Here, from the UK *Concrete* magazine is information about how 'photocatalytic concrete' can fight pollutants in the air and be self-cleaning, in the same way as self-cleaning glass. This is

based on nanotechnology – we have heard about the application of nanotechnology in medicine, electronics and other fields, but you might have wondered what further practical applications there might be in construction. Click [here](#) to see one answer.

Technical update - effect of cylinder size on compressive strength

In the concrete standard, compressive strength classes for cylinder specimens are based on 150mm diameter. However, other sizes may be used, if a relationship with the 'standard' size can be established. For a readymix producer, using 150mm cylinders is often difficult – the size of the concrete sample, the physical difficulty of transporting very heavy specimens from sites by road.

In the '*Hazir beton*' magazine, we have news from Turkey of data relating the strength of 150mm diameter specimens with those of more convenient 100mm specimens on a range of concrete strengths. It looks like they can be considered equivalent.

Read more [here](#) (Article in turkish with English translation/summary).

